BEFORE THE
Federal Communications Commission
WASHINGTON, D.C.

In the Matter of	)	
	)	
Section 68.4(a) of the Commission's Rules	)	
Governing Hearing Aid Compatible Telephones	)	WT Docket No. 01-309
	)	RM-8658
	)	

REPLY COMMENTS OF
THE CELLULAR TELECOMMUNICATIONS & INTERNET ASSOCIATION

The Cellular Telecommunications & Internet Association ("CTIA")[1] respectfully submits these Reply Comments in response to the Wireless Telecommunications Bureau's Public Notice[2] seeking comment on pending Petitions for Reconsideration in the above-captioned proceeding.[3]

I. CTIA Does Not Oppose the ANSI C63.19 Measurement Standard, But Urges the Commission to Amend Its Wireless HAC Rules to Allow Subsequent Improvements to the ANSI C63.19 Standard.

A. By Adopting the ANSI C63.19-2001 Standard, the FCC's Rules Require Use of an Outdated Version of the Standard.

In the HAC Order, the Commission adopted the then current 2001 version of the ANSI C63.19 standard and contemplated that it may need to revisit the standard as the industry

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[1] CTIA is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the association covers all Commercial Mobile Radio Service ("CMRS") providers and manufacturers, including cellular, broadband PCS, ESMR, as well as providers and manufacturers of wireless data services and products.

[2] *Public Notice*, Wireless Telecommunications Bureau, DA-04-567, (rel. Feb. 26, 2004).

[3] *See In the Matter of Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatibility Telephones,* Report and Order, WT Docket No. 01-309, FCC 03-168 (rel. Aug. 14, 2003) 68 Fed. Reg. 54173 (Sept. 16, 2003) (hereinafter "HAC Order or "Order").

conducts further tests on the standard.[4] In its comments, the relevant ANSI subcommittee, ANSI ASC C63 SC8, acknowledged, "With the adoption of ANSI C63.19 by the FCC, and the subsequent increased experience gained in many testing laboratories and because of technological changes in both the hearing aid and telephone industries it soon became apparent that a revision to ANSI C63.19 was needed."[5] Accordingly, ANSI ASC C63 approved a review and revision of the ANSI C63.19-2001 standard ("ANSI C63.19 Revision Project").

In concert with the ANSI C63.19 Revision Project, the Alliance for Telecommunications Industry Solutions ("ATIS") established the ATIS Incubator Solutions Program #4: Hearing Aid Compatibility ("AISP.4-HAC"). Mirroring the Commission's goals in this docket, the mission of the AISP.4-HAC is "to investigate performance between hearing aids and wireless devices to determine methods of enhancing interoperability and usability for consumers with hearing aids."[6] AISP.4-HAC already has yielded meaningful improvements to the test protocols and procedures associated with the portions of the ANSI C63.19-2001 standard applicable to digital wireless devices. Significantly, AISP.4-HAC is currently working on revision 2.5 ("Rev. 2.5") to the ANSI C63.19-2001 standard, and there is constant dialogue and coordination between the two organizations.

ATIS submitted several of its proposed improvements to the ANSI C63.19 Revision Project. Individual members of AISP.4-HAC also provided their substantive comments and recommendations on the draft revisions. In its comments, ANSI ASC C63 SC8 noted that these

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4 HAC Order at ¶ 49.

5 *See* Comments of American National Standards Institute Accredited Standards Committee C63 (EMC) Subcommittee 8 (Medical Devices) ("ANSI ASC C63 SC8") at 2 (filed Mar. 29, 2003).

6 *See* AISP.4-HAC website at http://www.atis.org/atis/hac/hachome.htm.

substantive comments and recommendations are under consideration for reballoting and incorporation in the next revision of the ANSI standard.[7] Within the course set by the Commission, ANSI and ATIS are working diligently to achieve consensus on improvements to the current standard, and CTIA is optimistic that the meaningful contributions submitted by ATIS will be approved and incorporated in the ANSI C63.19-2004 revised standard. Notwithstanding these diligent and concerted efforts by the industry standards bodies, CTIA is concerned that the Commission's current rules will freeze the standard at the "state of the art" almost three years ago, and not permit the hearing aid and wireless industries to continue to provide consumers with improved solutions to Hearing Aid Compatibility. Accordingly, CTIA urges the Commission to revise its HAC wireless rules to encourage innovation, and provide consumers and industry the benefits that will flow from an improved standard based on subsequent improvements to the ANSI C63.19-2004 standard developed as a result of the scheduled "round-robin" laboratory tests and prospective field tests.

While the ANSI standards-setting process has proven itself to be a viable mechanism for achieving joint industry consensus over an extended period of time, CTIA is concerned that the ANSI standard review and revision process, alone, is not conducive for incorporating improvements in a time frame that will permit industry to meet the Commission's September 2005 compliance date. Experience with the standards setting process suggests that to move quickly towards commercial realization of a new technical standard, an intensive and relatively expeditious, joint industry technical effort to complement ANSI's standard review and revision process is generally required.[8]

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[7] *See* ANSI ASC C63 SC8 Comments, at 3.

[8] CTIA concurs with ANSI ASC C63 SC8 that standards may be reviewed and revised more frequently than the requisite five-year period. While the ANSI C63.19 Revision Project

For example, the ATIS TTY Technical Standards Implementation ("TTSI") Incubator was initially established in Spring 2001 as a technical working group of the Wireless E911/TTY Forum to facilitate implementation of the technical standards that would allow the transmission of 911 calls over digital wireless systems using 45.5 Baudot TTY devices. The TTSI provided the appropriate venue and conditions for expeditiously addressing technical implementation issues as they arose during the various phases of testing. The TTSI identified deficiencies in the relevant baseline standards and continually refined and improved them based on the technical data gained from the laboratory and field tests conducted throughout the United States. The TTSI's efforts also resulted in the development of a much-needed testing program for Public Safety Answering Points (PSAPs) to confirm their compliance with the appropriate technical standards. While ATIS submitted the relevant technical standards to ANSI for approval, the TTSI continued to make improvements to the standards and incorporate them on a timely basis that permitted wireless carriers and their suppliers to meet their respective December 31, 2001 and June 30, 2002 FCC Wireless TTY compliance dates. Accordingly, CTIA recommends a similar approach that will allow the industry to continually improve the standard (post-April 2004) based on the results gleaned from the scheduled laboratory tests and the subsequent field tests, and rules that are sufficiently flexible to permit the industry to implement and incorporate revisions quickly. Proposed revisions can be submitted to ANSI ASC C63 for consideration and review while testing and subsequent improvements continue.

II. The FCC Should Adopt A Flexible and Compliant Approach Similar to the Approach It Took with Its Cellular System Compatibility Specification Rule.

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has taken approximately seven months to complete, it is unclear whether ANSI C63 will revisit the standard once the April 2004 reballoting process is closed.

The FCC can and should adopt rules that permit, and even encourage, continued technical innovation. In 1983, the FCC adopted rules for the nascent cellular industry in Part 22 of its rules. Included in these rules was the cellular system compatibility specification rule which incorporated by reference the TIA "Advanced Mobile Phone System" (AMPS) standard to ensure that equipment used on analog cellular networks was designed in accordance within the industry standard technical specifications to ensure compatibility between the mobile device and base station.[9] The FCC's cellular system compatibility specification rule was drafted to be sufficiently flexible to allow cellular licensees to include special operational features, provided that such features were developed by joint industry consensus through the standards-setting process and the operational feature did not adversely affect the compatibility between the mobile and base station.[10] This approach established an excellent precedent that encouraged industry to develop and deploy new and improved standards as long as the compatibility of the equipment was not "adversely affected." CTIA strongly urges the Commission to take a similar approach with respect to the wireless HAC rules.

Accordingly, CTIA proposes the following amendment to the FCC's HAC Wireless Rules:

> The methods of measuring compatibility between digital wireless mobile devices and hearing aids shall be in accordance with the technical specifications contained in the standard document, ANSI C63.19-2004 *Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids*, or the corresponding portions applicable to digital wireless mobile devices, or whichever of the successor standard documents of the ANSI C63.19 are in effect at the time of the manufacture of the digital wireless mobile device. Special test methods or protocols that have been developed by joint industry consensus through the Alliance for Telecommunications

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9 *See* 47 C.F.R. § 22.933 (2001). The Commission amended Section 22.933 of its rules to reflect its decision to sunset the analog cellular requirement by 2005. *See* 67 Fed. Reg. 77192 (Dec. 17, 2002).

10 *Id.*

Industry Solutions ("ATIS") and established as a ATIS standard may be used at the option of the CMRS licensee, provided that the performance measurements as specified in ANSI C63.19-2004 are not adversely affected.

III. Several Hearing Aid Manufacturers Are Using the ANSI C63.19-2001 Standard, and CTIA Encourages Them to Use ANSI C63.19-2004, to the Extent that the Revised Standard Provides Improvements to the Hearing Aid Measurement Portions of the Standard.

Several hearing aid manufacturers acknowledge they are currently utilizing the ANSI C63.19 standard, and "it has proven to be a reliable and practical testing method."[11] Moreover, they have found that the ANSI C63.19 standard is "repeatable, predictable and accurate."[12] This endorsement of the predictability and accuracy of the portion of the ANSIC63.19-2001 standard applicable to hearing aid devices is a major development in the long process of developing the HAC standard. In July 2002, HIA's representative indicated that hearing aid manufacturers were experiencing test problems with the ANSI C63.19 standard, particularly problems with the repeatability of test results using the standard. At that time, HIA indicated that the repeatability and predictability problems were the major obstacles that must be overcome in order for the hearing aid industry to implement the standard or label their products accordingly.[13] It now appears that the Hearing Aid Commenters have overcome these hurdles and are embracing the

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[11] *See* Memorandum to Federal Communications Commission from Michael O. Eckert, Managing Director, Qualitone Hearing Instruments (filed Mar. 29, 2004); Memorandum to Federal Communications Commission from Zachery A. Hammock, Managing Director, Omni Hearing Systems (filed Mar. 30, 2004); Letter from Lawrence T. Hagen, President/CEO, Micro-Tech Hearing Instruments; and Electone, Inc.'s Comments on Petitions for Reconsideration. (filed Mar. 29, 2004)(collectively "Hearing Aid Commenters")

[12] *Id.* Since the ANSI C63.19 standard includes separate measurements tests for the different devices, *i.e.,* the hearing aid device and the wireless mobile device, CTIA assumes that Hearing Aid Commenters are referencing the portion of the ANSI C63.19-2001 standard applicable to the performance measurement of the hearing aid.

[13] *See* Hearing Aid and Digital Wireless Phones Compatibility, Summary of Meeting, July 2, 2001, attached hereto as Appendix A.

ANSI C63.19-2001 standard. Since repeatability and predictability are no longer obstacles, there should be little, if any, reticence to the labeling of hearing aid devices in accordance with the ANSI C63.19 standard, since there should be no risk of violating the FDA's rules governing unsubstantiated claims.

The AISP.4-HAC's impending "round robin" tests and future field tests will undoubtedly result in improvements to both the 2001 and 2004 versions of the ANSI C63.19 standard applicable to digital wireless devices, and CTIA is hopeful that such improvements will allow the wireless industry to enthusiastically embrace the standard. The AISP.4-HAC has extended an invitation to the Hearing Industries Association ("HIA") to participate in the HAC incubator process. CTIA strongly urges HIA's on-going participation in AISP.4-HAC and looks forward to working with HIA and its members in that process.

While the FCC rules require a wireless phone to meet, at a minimum, a U3 or U3T performance level as set forth under ANSI C63.19-2001 standard, the Hearing Aid Commenters have indicated that they are working to ensure that hearing aids achieve at least a U2 performance level. While a U2 performance level may be a substantial improvement for hearing aid devices, particularly if such devices previously had little or no immunity, CTIA urges the hearing aid industry to continue to work towards even higher immunity levels that will achieve a U3 performance level or above. A U3 performance level or above will provide tremendous improvement in hearing aids used not only with digital wireless phones but also other, or in proximity to, digital consumer electronic equipment such as plasma HDTV screens, computer monitors, PDAs, and more. Such an improvement would provide tremendous benefits for consumers who wear hearing aids and use digital consumer electronic equipment in close proximity with their digital wireless phones. CTIA is also encouraged by the HIA comments

that the hearing aid industry has committed to further improvements in RF immunity and will look for new components and new manufacturing methods that will produce such a result.[14]

In its comments, Tempest, Inc., a small, FCC-approved test laboratory, claims that its research and subsequent patents demonstrate the deficiencies in the ANSI C63.19-2001 standard.[15] They contend that the ANSI C63.19-2001 standard will not solve the RF interference problem, and that a technical solution to the HAC compatibility problem has existed since 1997.[16] If Tempest, Inc. has a solution that may resolve the HAC issue, CTIA strongly encourages Tempest, Inc. to participate in the AISP.4-HAC incubator, which is an appropriate venue for sharing technical data and developing and testing technical solutions that may address the RF interference problem. CTIA also encourages individual hearing aid manufacturers to actively participate in the AISP.4-HAC as well as the ANSI process. It is critical that the parallel technical efforts undertaken by AISP.4-HAC and ANSI C63 compliment one another. Moreover, several consumer advocacy groups support and participate in the AISP.4-HAC, *e.g,* SHHH, and Gallaudet University. Their expertise regarding consumer usability, outreach, and education is invaluable in the implementation process.

IV. The Commission Should Not Require HAC Handsets for TDMA Air Interface.

The Rural Telecommunications Group and TDMA Carriers ("TDMA Petitioners") seek reconsideration of the FCC's requirement to offer HAC handsets on the TDMA air interface.[17]

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[14] Comments of the Hearing Industries Association, at 3.

[15] Comments of Paula S. Gnecco, M.A., President, Better Hearing, Inc. and Louis T. Gnecco, M.S.E.E., President, Tempest, Inc. ("Tempest, Inc."), at 7.

[16] *See* Tempest, Inc. Comments, at 3-6.

[17] *See* Petition for Reconsideration of TDMA Carriers and the Rural Telecommunications Group at 4.

The TDMA Petitioners accurately describe the industry's steady migration away from TDMA to other digital air interfaces, the evaporation of industry-wide support for the TDMA air interface, and the steady decline in the development and availability of new TDMA handset models. [18] Sprint, Rural Cellular Association and Cingular Wireless support reconsideration of this requirement and provide additional data that accurately represents the situation among small and large carriers offering TDMA digital air interface.[19]

CTIA supports reconsideration of the requirement to offer HAC handsets for TDMA digital air interface. Industry research analysts show that TDMA as a percentage of the embedded base is declining. Specifically, they report that the TDMA percentage of the market share in the United States fell from 27% to 23% between August and December 2003.[20] The Yankee Group projects that TDMA handset sales for the U.S. and Canada, jointly, will decline sharply over the next two to three years, going from approximately 4.2 million TDMA handsets in 2004, to 1.4 million TDMA handsets in 2005, and approximately 1 million TDMA handsets in 2006, with a further decline in 2007.[21] The Yankee Group also reports that it is anticipated that

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[18] *See* Petition for Reconsideration of TDMA Carriers and the Rural Telecommunications Group, at 2.

[19] *See* Sprint Comments, at 12 (filed Dec. 1, 2003); Comments of Rural Cellular Association in Support of Petition for Reconsideration (filed Nov. 26, 2003); Reply of Cingular Wireless LLC, at 1-2 (filed Dec. 11, 2003).

[20] *See* EMC WORLD CELLULAR DATABASE, NORTH AMERICAN MOBILE COMMUNICATIONS REPORT, ISSUE NO. 10, at 4 (Aug. 2003). *See also* EMC WORLD CELLULAR DATABASE, NORTH AMERICAN MOBILE COMMUNICATIONS REPORT, ISSUE NO. 12, at 42 (Dec. 2003).

[21] *See* JOHN JACKSON, THE YANKEE GROUP, A LONG TWILIGHT FOR TDMA HANDSETS IS UNDER WAY (July 21, 2003).

the embedded base of TDMA subscribers in the U.S. and Canada will decrease from 22.6 million in 2204 to 13.2 million in 2005, 4.2 million in 2006 and 2.2 million in 2007.[22]

The Commission's rules insure that consumers will have many alternatives to TDMA HAC handsets. Given the average "life cycle" of a hearing aid is five to six years, consumers purchasing wireless HAC compliant TDMA handsets (which will not be required to be made available in the marketplace until 2005) most likely will need to replace the TDMA handset when their carrier migrates users to other digital air interfaces long before they replace their hearing aid. Since these other digital air interface technologies already are being deployed, hearing aid users should only be required to go through the process of selecting a handset that is compatible with their hearing aid once.

V. CTIA Supports Reconsideration of the Commission's Wireless HAC Rules That Discriminates Between Large and Small Carriers.

Verizon Wireless seeks reconsideration of the phase-in requirements set forth in Section 20.19(c) which imposes implementation deadlines for offering digital HAC handsets based on a wireless carrier's size. [23] Verizon correctly notes that Section 20.19(c)(3) imposes a stricter requirement on Tier I wireless carriers than Tier II and Tier III carriers without any explanation or basis for such regulatory disparity among CMRS providers. Verizon Wireless maintains that the wireless HAC rules should be consistent for all wireless carriers, regardless of size. [24] T-

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22 *See* JOHN JACKSON, THE YANKEE GROUP, A LONG TWILIGHT FOR TDMA HANDSETS IS UNDER WAY (July 21, 2003). *But see* GOLDMAN SACHS GLOBAL INVESTMENT RESEARCH, GLOBAL TELECOM WEEKLY, THE AMERICAS, at 2 (Mar. 26, 2004)("TDMA not going away any time soon….The move from TDMA to GSM should become more compelling by the time the deal [Cingular/AT&T Wireless merger] closes given progress with buildouts among GSM roaming partners and AWE's own network enhancement building GSM at 850 MHz.")

23 *See* Verizon Wireless Petition for Reconsideration, at 2-6 (filed Oct. 16, 2003).

24 *Id.*

Mobile USA, Cingular and Sprint also support reconsideration of this requirement and accurately describe the unintended consequences for discriminating among wireless carriers based solely on size. [25]

CTIA supports reconsideration of the phase-in requirement set forth in Section 20.19(c)(3) because there is no reasoned basis for such regulatory disparity. All wireless carriers, regardless of size, are dependent on their handset suppliers and "the laws of physics do not differ based on a carrier's size." Accordingly, the wireless HAC rules should be consistently applied to all wireless carriers, regardless of size.

[25] *See* T-Mobile USA, Inc. Comments, at 3-4; Sprint Comments, at 4-7; and Cingular Reply Comments, at 4-6.

CONCLUSION

Based on the foregoing discussion, CTIA respectfully requests that the FCC reconsider and clarify certain provision of the FCC's HAC Order as delineated by CTIA in its Petition for Reconsideration and Clarification[26] and these Reply Comments.

Respectfully submitted,

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Dated: April 13, 2004

[26] CTIA firmly maintains its position that the FCC's decision to impose the 25% and 50% phase-in requirement is arbitrary and capricious, and the FCC's wireline HAC complaint procedure under Part 68 of the Commission's rules is not appropriate for the wireless industry and is not justifiable.